

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
South Central Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

ArborTech Forest Products, Inc.
500 Dearing Ave., Blackstone (Nottoway County) Virginia
Permit No. SCRO31039

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, ArborTech Forest Products, Inc. has applied for a Title V Operating Permit for its Blackstone facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: October 24, 2005

Air Permit Manager: _____ Date: October 24, 2005

Regional Permit Manager: _____ Date: October 24, 2005

1. GENERAL

FACILITY INFORMATION

Permittee

ArborTech Forest Products, Inc.
500 Dearing Ave.
Blackstone, VA 23824

Facility

ArborTech Forest Products, Inc.
500 Dearing Ave.
Blackstone, VA 23824

AIRS ID No. 51-135-0037

SOURCE DESCRIPTION

SIC Code: 2421 – Dimensional lumber manufacturing facility (pine lumber) and by-products (ie., bark, chips, sawdust, and shavings).

The facility is a Title V major source of Volatile Organic Compounds (VOC) and methanol. This source is located in an attainment area for all pollutants, and is a PSD minor source. The facility was previously permitted under a Minor NSR Permit issued on 8/27/02. The 8/27/02 permit superseded the greenfield facility permit issued on 6/30/00 and was amended March 3, 2004. Since the potential to emit (PTE) for methanol, a currently regulated hazardous air pollutant (HAP), exceeds 10 tons/yr; this facility is a major source of HAPs. This facility is subject to the requirements of 40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutant (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters and 40 CFR 63 Subpart DDDD, NESHAP for Plywood and Composite Wood Products. Construction has yet to commence for two emission units included in the 2002 NSR permit, as amended March 3, 2004 (ie. the wood-waste boiler (B2) and dry (lumber) kiln (K4)). The permittee has stated that construction of these two emission units will begin within 18 months and therefore, they have been included in the current Title V permit.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was conducted on August 9, 2005. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description (Note 4)	Size/Rated Capacity (Notes 1 & 2)	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
B1	B1-1	Hurst Boiler Wood-waste fired boiler Model m-4000-WWF, 2000	28.7 MMBtu/hr	Hurst Boiler multicyclone	B1A	PM	8/27/02, as amended March 3, 2004
B2	B2-1	Hurst Boiler Wood-waste fired boiler Model m-4000-WWF, June 28, 2005.	28.7 MMBtu/hr	Hurst Boiler multicyclone	B2A	PM	8/27/02, as amended March 3, 2004
B3	B3-3	Hurst Boiler Distillate oil fired boiler, 2002	9.9 MMBtu/hr	---	---	---	8/27/02, as amended March 3, 2004
Process A							
K1	K1 – 1 thru 10 (Note 3)	Wellons 54 foot dual track dry (lumber) kiln, 2001	4.37 MBf/hr	---	---	---	8/27/02, as amended March 3, 2004
K2	K2 – 1 thru 10	Wellons 54 foot dual track dry (lumber) kiln, 2001	4.37 MBf/hr	---	---	---	8/27/02, as amended March 3, 2004
K3	K3 – 1 thru 10	Wellons 86 foot dual track dry (lumber) kiln, 2002	6.96 MBf/hr	---	---	---	8/27/02, as amended March 3, 2004
Process B							
P1	P1-1	Howell Metal planer system, 2001	50 MBf/hr	Howell Metal cyclone	P1A	PM	8/27/02, as amended March 3, 2004

Notes:

1. The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.
2. MBf / hr = thousand board feet per hour
3. Each kiln has 10 vents. Alternately, five act as vents and five act as intakes.
4. Date = installed date unless otherwise noted.

EMISSIONS INVENTORY

A copy of the 2004 annual emission update is attached. (See Attachment #1)

Emissions are summarized in the following tables.

2004 Actual Emissions					
	Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO ₂	PM ₁₀	NO _x
Total	127.6	72.7	14.3	43.5	35.0

2003 Facility Hazardous Air Pollutant Emissions	
Pollutant	Hazardous Air Pollutant Emission in Tons/Yr
Methanol	9.7

2. EMISSION UNIT APPLICABLE REQUIREMENTS

2.1 Fuel Burning Equipment

2.1.1 Wood-waste boiler B1

Boiler B1 is a 28.7 MMBtu/hr, wood-waste fired unit for which construction and operation is currently authorized in the NSR permit dated 8/27/02, as amended March 3, 2004. Since boiler B1 was in operation prior to January 13, 2003, has a rated capacity in excess of 10 MMBtu/hr (heat input), and the permit dated March 3, 2004 does not limit the annual operating hours to less than 10%, it is considered to be an existing large solid fuel boiler for 40 CFR 63 Subpart DDDDD.

Limits

In addition to the 40 CFR 63 Subpart DDDDD requirements, the limits for boiler B1 are carried forward from the 2002 NSR permit, as amended on March 3, 2004 into the Title V permit:

1. A multicyclone will control PM emissions.
2. The approved waste-wood fuel is specified.
3. The allowable consumption rate for waste-wood fuel is limited.
4. Boiler and air pollution control equipment operating and training procedures are specified.
5. The allowable emission rates and opacity are limited.
6. The applicability of NSPS Subpart Dc is specified. (Note: Due to the capacity of B1, the only applicable standards from the subpart are notification and recordkeeping requirements.)
7. The work practice standards and emission limits for existing large solid fuel boilers in Tables 1 - 4 of 40 CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, apply to boiler B1. The applicable requirements of 40 CFR 63 Subpart DDDDD for boiler B1 are incorporated by reference in the Title V permit.

Monitoring

In addition to the 40 CFR 63 Subpart DDDDD requirements, the monitoring requirements for boiler B1 are carried forward from the 2002 NSR permit into the Title V permit:

1. The structural integrity of the multicyclone (Ref. B1A) is confirmed annually.
2. Periodic monitoring requirements for opacity from boiler B1 is based on observation of the presence or absence of visible emissions. In the event visible emissions are observed, corrective action is required, or VEE's as determined by EPA Method 9 are required to demonstrate compliance with the applicable opacity limit.
3. The monitoring requirements for existing large solid fuel boilers of 40 CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, apply to boiler B1. The monitoring requirements of 40 CFR 63 Subpart DDDDD for boiler B1 are incorporated by reference in the Title V permit.

Recordkeeping

In addition to the 40 CFR 63 Subpart DDDDD requirements, the recordkeeping requirements for boiler B1 are carried forward from the 2002 NSR permit, as amended on March 3, 2004 into the Title V permit:

1. Records of fuel usage are required.
2. Emission calculation records are required.
3. The recordkeeping requirements for existing large solid fuel boilers of CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters apply to boiler B1. The recordkeeping requirements of 40 CFR 63 Subpart DDDDD for boiler B1 are incorporated by reference in the Title V permit.

In addition, visual emission logs are required to verify compliance with the periodic monitoring requirements.

Testing

1. Testing / monitoring ports are required upon request.
2. The initial compliance testing requirements for existing large solid fuel boilers of CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, apply to boiler B1. The initial compliance testing requirements of 40 CFR 63 Subpart DDDDD for boiler B1 are incorporated by reference in the Title V permit.
3. Subsequent compliance testing requirements for existing large solid fuel boilers of CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, apply to boiler B1. The subsequent compliance testing requirements of 40 CFR 63 Subpart DDDDD for boiler B1 are incorporated by reference in the Title V permit.

Reporting

1. The "Recordkeeping and Reporting" requirements of the Title V General Conditions apply to boiler B1.
2. The reporting requirements for existing large solid fuel boilers of CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters apply to boiler B1. The reporting requirements of 40 CFR 63 Subpart DDDDD for boiler B1 are incorporated by reference in the Title V permit.

2.1.2 Wood-waste boiler B2

Boiler B2 is a 28.7 MMBtu/hr, wood-waste fired unit which began construction on June 28, 2005, and is currently authorized in the NSR permit dated 8/27/02, as amended March 3, 2004. Since boiler B1 was not constructed prior to January 13, 2003, has a rated capacity in excess of 10 MMBtu/hr (heat input), and the permit dated March 3, 2004 does not limit the annual operating hours to less than 10%, it is considered to be a new large solid fuel boiler for 40 CFR 63 Subpart DDDDD.

Limits

In addition to the 40 CFR 63 Subpart DDDDD requirements, the limits for boiler B2 are carried forward from the 2002 NSR permit, as amended on March 3, 2004 into the Title V permit:

- 1 A multicyclone will control PM emissions.
- 2 The approved waste-wood fuel is specified.
- 3 The allowable consumption rate for waste-wood fuel is limited.
- 4 Boiler and air pollution control equipment operating and training procedures are specified.
- 5 The allowable emission rates and opacity are limited.
- 6 The applicability of NSPS Subpart Dc is specified. (Note: Due to the capacity of B2, the only applicable standards from the subpart are notification and recordkeeping requirements.)
- 7 The work practice standards and emission limits for new large solid fuel boilers in Tables 1 - 4 of 40 CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, apply to boiler B2. The applicable requirements of 40 CFR 63 Subpart DDDDD for boiler B2 are incorporated by reference in the Title V permit.

Monitoring

In addition to the 40 CFR 63 Subpart DDDDD requirements, the monitoring requirements for boiler B2 are carried forward from the 2002 NSR permit, as amended on March 3, 2004 into the Title V permit:

- 1 The structural integrity of the multicyclone (Ref. B2A) is confirmed annually.
- 2 Periodic monitoring requirements for opacity from boiler B2 is based on observation of the presence or absence of visible emissions. In the event visible emissions are observed, corrective action is required, or VEE's as determined by EPA Method 9 are required to demonstrate compliance with the applicable opacity limit.
- 3 The monitoring requirements for new large solid fuel boilers of 40 CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, apply to boiler B2. The monitoring requirements of 40 CFR 63 Subpart DDDDD for boiler B2 are incorporated by reference in the Title V permit.

Recordkeeping

In addition to the 40 CFR 63 Subpart DDDDD requirements, the recordkeeping requirements for boiler B2 are carried forward from the 2002 NSR permit, as amended on March 3, 2004 into the Title V permit:

- 1 Records of fuel usage are required.
- 2 Emission calculation records are required.
- 3 The recordkeeping requirements for new large solid fuel boilers of CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters apply to boiler B2. The recordkeeping requirements of 40 CFR 63 Subpart DDDDD for boiler B2 are incorporated by reference in the Title V permit.

In addition, visual emission logs are required to verify compliance with the periodic monitoring requirements.

Testing

In addition to the 40 CFR 63 Subpart DDDDD requirements, the testing requirements for boiler B2 are carried forward from the 2002 NSR permit, as amended on March 3, 2004 into the Title V permit:

- 1 Testing / monitoring ports are required upon request.
- 2 Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9.
- 2 The initial compliance testing requirements for new large solid fuel boilers of CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, apply to boiler B2. The initial compliance testing requirements of 40 CFR 63 Subpart DDDDD for boiler B2 are incorporated by reference in the Title V permit.
- 3 Subsequent compliance testing requirements for new large solid fuel boilers of CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, apply to boiler B2. The subsequent compliance testing requirements of 40 CFR 63 Subpart DDDDD for boiler B2 are incorporated by reference in the Title V permit.

Reporting

In addition to the 40 CFR 63 Subpart DDDDD requirements, the reporting requirements for boiler B2 are carried forward from the 2002 NSR permit, as amended on March 3, 2004 into the Title V permit:

- 1 The "Recordkeeping and Reporting" requirements of the Title V General Conditions apply to boiler B2.
- 2 The initial notifications requirements for NSPS Subpart Dc affected facilities.
- 2 The reporting requirements for new large solid fuel boilers of CFR 63 Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters apply to boiler B2. The reporting requirements of 40 CFR 63 Subpart DDDDD for boiler B2 are incorporated by reference in the Title V permit.

2.1.3 Distillate Oil boiler B3

Boiler B3 is a 9.9 MMBtu/hr, distillate oil fired unit. Due its capacity, boiler B3 is exempt from NSR permitting requirements. Since boiler B3 was in operation prior to January 13, 2003 and has a rated capacity less than 10 MMBtu/hr (heat input), it is considered to be an existing small liquid fuel boiler and therefore exempt from the requirements of 40 CFR 63 Subparts DDDDD and A per 40 CFR 63.7506(c)(2) and 40 CFR 60 Subpart Dc (NSPS). However, it is a significant emission unit per 9 VAC 5-80-720 C, and is therefore included in the current Title V permit.

Limits

The following limits for boiler B3 are included in the Title V permit:

1. The approved distillate oil fuel is specified.
2. The allowable emission rates, and opacity are limited. (Note: These limits are based on the existing source emissions standards for fuel burning equipment and compliance is expected to be easily satisfied for this distillate oil boiler.)
3. Boiler and air pollution control equipment operating and training procedures are specified.

Monitoring and Recordkeeping

The following monitoring and recordkeeping requirements for boiler B3 are included in the

Title V permit:

1. Periodic monitoring requirements for opacity from boiler B3 is based on observation of the presence or absence of visible emissions. Since the only approved fuel is distillate oil, no visible emissions are expected. However, in the event visible emissions are observed, corrective action is required, or VEE's as determined by EPA Method 9 are required to demonstrate compliance with the applicable opacity limit.
2. Records of fuel usage are required.
3. Visual emission logs are required to verify compliance with the periodic monitoring requirements.

Testing

Testing / monitoring ports are required upon request.

Reporting

The "Recordkeeping and Reporting" requirements of the Title V General Conditions apply to boiler B3.

2.2 Process Equipment

2.2.1 Dry (lumber) kilns K1, K2, and K3

Construction and operation of the dry (lumber) kilns K1, K2, and K3 are currently authorized in the NSR permit dated 8/27/02, as amended March 3, 2004. Currently, only kilns K1-K3 have been constructed, and the source has decided to extend Kiln #3 (Ref. K3) instead of constructing Kiln #4 (Ref. K4). 40 CFR Part 63 Subpart DDDD, Plywood and Composite Wood Products (PWCP), was promulgated on July 30, 2004. Subpart DDDD, includes lumber kilns as affected facilities per 40 CFR 63.2231. According to the preamble for the final rule (see Attachment 2) "...all lumber kilns are essentially identical, there are no known lumber kilns with emissions controls, and no known cost effective emission controls. Furthermore, Subpart DDDD has no additional reporting or recordkeeping requirements for lumber kilns located at sawmills." Since there are no controls and/or emission standards for HAP emissions from lumber kilns, the permittee is required to only submit an initial notification as required by the PWCP NESHAP.

Limits

The following limits for the dry (lumber) kilns K1, K2, and K3 are carried forward from the 2002 NSR permit, as amended on March 3, 2004 into the Title V permit:

1. The allowable throughput of wood is limited.
2. The allowable emission rates are limited.

In addition, opacity is limited in accordance with the new source standard for visible emissions.

Monitoring

Periodic monitoring requirements for opacity from the dry (lumber) kilns K1, K2, and K3 are based on observation of the presence or absence of visible emissions. In the event visible emissions are observed, corrective action is required, or VEE's as determined by EPA Method 9 are required to demonstrate compliance with the applicable opacity limit.

Recordkeeping

The following recordkeeping requirements for the dry (lumber) kilns K1, K2, and K3 are carried forward from the 2002 NSR as amended on March 3, 2004 permit into the Title V

permit:

1. Records of wood throughput are required.
2. Emission calculation records are required.

In addition, visual emission logs are required to verify compliance with the periodic monitoring requirements.

Testing

Testing / monitoring ports are required upon request.

Reporting for kilns K1 thru K3

The "Recordkeeping and Reporting" requirements of the Title V General Conditions apply to the dry (lumber) kilns K1, K2, and K3.

2.2.2 Planer P1

Construction and operation of planer P1 is currently authorized in the NSR permit dated 8/27/02, as amended March 3, 2004. The planer (Ref. P1), is not subject to the provisions of 40 CFR Part 63 Subpart DDDD, Plywood and Composite Wood Products.

Limits

The following limits for planer P1 are carried forward from the 2002 NSR permit as amended on March 3, 2004 into the Title V permit:

1. A cyclone will control PM emissions.
2. The allowable throughput of wood is limited.
3. The allowable emission rates and opacity are limited.

Monitoring

The following monitoring requirements for boiler P1 are included in the Title V permit:

1. The structural integrity of the cyclone is confirmed annually.
2. Periodic monitoring requirements for opacity from planer P1 are based on observation of the presence or absence of visible emissions. In the event visible emissions are observed, corrective action is required, or VEE's as determined by EPA Method 9 are required to demonstrate compliance with the applicable opacity limit

Recordkeeping

The following recordkeeping requirements for planer P1 are carried forward from the 2002 NSR permit as amended on March 3, 2004 into the Title V permit:

1. Records of wood throughput are required.
2. Emission calculation records are required.

In addition, visual emission logs are required to verify compliance with the periodic monitoring requirements.

Testing

Testing / monitoring ports are required upon request.

Reporting

The "Recordkeeping and Reporting" requirements of the Title V General Conditions apply to planer P1.

2.3 Facility Wide

The following applicable requirements for the facility are carried forward from the 2002 NSR permit as amended on March 3, 2004 into the Title V permit:

1. The department may require the facility to reduce operation as necessary to avoid violating a primary ambient air quality standard.
2. Minimum maintenance / operation procedures are specified.
3. Testing / monitoring ports are required upon request.

2.4 Some general statements about MACT applicability

1. As discussed in the engineering review of the 2002 NSR permit (see Attachment #3), the ArborTech facility is not subject to a “new source MACT” determination” as may be required by Section 112 (g) of the Clean Air Act (CAA).
2. Wood planing is not a listed category in Section 112 (c) of the CAA, and therefore the planer is not subject to a MACT.

2.5 Compliance Assurance Monitoring (CAM)

Per Chapter 9 of current Title V manual, CAM applies to an emission unit if (1) that unit has the potential to emit (in the absence of add-on controls) a regulated pollutant in an amount that exceeds its major source threshold, (2) is subject to an emission limitation for that pollutant, and (3) uses a control device to achieve compliance with the emission limitation.

The uncontrolled emission rate for PM (ie., the only pollutant for which add-on control is required) from each solid fuel Boiler (Ref. B1 and B2) is less than the major source threshold of 100 tons / year. Neither, Boiler B3, nor kilns K1, K2, and K3 employ add-on emission controls. Therefore, none of the emissions units B1, B3, K1, K2, or K3 are subject to CAM.

Based on the emission calculations performed by SCRO in support of the 2002 NSR permit, the planer P1 would be subject to CAM. However, both Chapter 9 of the Title V manual and 40 CFR 64, Compliance Assurance Monitoring, subdivide applicable emissions units into “Large” units (ie., those whose post-control emissions are greater than the major source threshold) and “Other” units (ie., those units whose pre-control emissions are greater than the major source threshold but whose post-control emissions are less than this threshold). Per both Chapter 9 of the Title V manual and 40 CFR 64, “other” emissions units are NOT subject to CAM until the first renewal of the Title V permit. (See 40 CFR 64.5 (b)) Planer P1 is an “other” unit and so is not subject to CAM for this current Title V permit action. (It should be noted that the 2002 era calculations were conservative and may well warrant recalculation when the application for permit renewal is received to confirm that the pre-control emissions are still considered “major” based on the then current, best available data.)

3. GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

Condition B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §§2.1-20.01:2 and §§10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

Condition F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

Condition J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits.

9 VAC 5-80-260. Enforcement.

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

Condition T. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

4. INSIGNIFICANT EMISSION UNITS

Insignificant emission units are listed in Condition VII of the Title V permit.

5. CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

6. PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in the Blackstone COURIER-RECORD on September 8, 2005. The public comment period ended on October 7, 2005 with no comments received by this office.